OBJECTIVES: To assess health care resource utilization and cost of cervical cancer from the perspective of British Columbia's health care system. **METHODS:** Retrospective observational data on women diagnosed with cervical cancer between 2004 and 2009 was utilized to calculate patient-level resource utilization from diagnosis to death or 5-year discharge. Domains of resource use included hospitalization, chemotherapy, radiotherapy, brachytherapy, medically necessary services such as laboratory, physician and diagnostics billed under B.C.'s Medical Services Plan and medication dispensed under B.C.'s Pharmacare program. Unit costs were applied to health care resources, producing per-patient costs. Relevant costs, presented in 2012 CDN dollars, were further separated by chemotherapy protocol, stage at diagnosis, screening history, progression date and age. **RESULTS:** The average cost of treating cervical cancer in B.C. was $32 023, (95% CI: $29 785 - $34 260). Hospital costs were the largest proportion of cost at a mean proportion of 37.8% (95% CI: 35.8, 39.8) of total cost. Mean length of inpatient hospital visits was 11.2 days, with 2 outpatient hospital visits per patient. Costs were also calculated by relevant clinical subgroups, including progression, age, stage, screening history and treatment protocol on cost and resource utilization. **CONCLUSIONS:** Cervical cancer resource utilization and costs are substantial in B.C.'s health care system. Such data is necessary for decision makers in designing and implementing screening and disease management policy. Results will provide inputs for the HPV FOCAL Study, a prospective investigation into the cost-effectiveness of utilizing the detection of HPV infection as a primary screening tool in B.C.

PCN71

ECONOMIC BURDEN OF PROLONGED AIR LEAK AFTER LUNG RESECTION: OPEN VERSUS VIDEO-ASSISTED THORACOSCOPIC SURGERY (VATS)

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OBJECTIVES: Prolonged air leak (PAL) following lung resection results in increased length of stay (LOS), morbidity and costs. Pulmonary resection can be performed open or by video-assisted thoracic surgery (VATS). This study quantifies the total health care utilization and expenditures in patients who experienced a PAL after undergoing lung resection. **METHODS:** This study utilized administrative health claims data from MarketScan® commercial and Medicare databases from 2009-2011. Patients were included if they underwent a lobectomy, segmentectomy or wedge resection. Patients were classified as having a PAL if LOS was greater than 5 days with a simultaneous ICD-9 code of 512.1 or 512.2 for pneumothorax. Data were analyzed on complications, LOS, readmission, and expenditures. Multivariable logistic regression analysis modeled for the binary outcome of PAL (yes or no). Expenditures and LOS were modeled using generalized linear models with a gamma distribution and log-link. **RESULTS:** 27,366 records were analyzed, including 10,585 lobectomies (39%), 2,100 segmentectomies (8%) and 14,681 wedge resections (53%). Multivariable logistic regression showed that open procedures are 40% (95% CI: 26% to 55%; p<0.0001) more likely to suffer PALs than VATS. When PALs occur, open procedures are associated with longer LOS than VATS (12.2 versus 11.4 days; p=0.0067) and are 75% (95% CI, 19% to 155%; p=0.0040) more likely to get readmitted within 30 days. Health care expenditures for patients with PALs are higher than for those without ($59,713 versus $44,077; p<0.0001). **CONCLUSIONS:** PALs cause an economic burden of ~$15,000 per patient in our health care system. VATS approach is associated with a significant reduction in PALs and total inpatient expenditures. In addition, when PALs occurred, VATS procedures were associated with a shorter LOS and reduced likelihood of readmission - thus reducing overall expenditure.

PCN72

COST ASSESSMENT OF ADVANCED OVARIAN CANCER TREATMENT IN A LARGE COHORT OF ELDERLY PATIENTS

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OBJECTIVES: Use of primary chemotherapy in the treatment of advanced ovarian cancer has increased in recent years. While, an on-going deliberation on the usefulness of this practice compared to primary debulking surgery (PDS) continues till date, none has studied monetary implications of the varying treatment practices. In this study, we estimate the lifetime costs of ovarian cancer by primary treatment. **METHODS:** A cohort of elderly women (≥ 65 years) with stage III and IV ovarian cancer was identified from the Surveillance, Epidemiology and End Results-Medicare linked database from January 1, 2006- December 31, 2009. Cost analysis was conducted from a payer (i.e., Medicare) perspective, and direct medical costs incurred by Medicare were integrated for each patient. Cumulative treatment costs were estimated using phase of care approach (wherein the mean phase specific costs were weighted with the survival function), starting from date of diagnosis until death or last follow-up (December 2010). All costs were adjusted for geographic variation and inflation over time and discounted at a rate of 3%. **RESULTS:** Among 3408 patients, 17.3% (n=591) received PDS, 57.2% (n=1951) received primary chemotherapy (only 5.6% (n=192) received subsequent surgery) and 25.4% (n=866) did not receive either surgery or chemotherapy within 12 months of diagnosis. The mean lifetime costs in patients receiving no cancer directed treatment was $24,467; with the resultant incremental mean lifetime costs estimated as $37,434, $79,089 and $45,301 for patients receiving PDS, primary chemotherapy with subsequent surgery, and primary chemotherapy without surgery, respectively. **CONCLUSIONS:** The mean lifetime cost in patients receiving neoadjuvant chemotherapy followed by delayed debulking surgery is double the cost in those receiving PDS. In conjunction with health outcome estimates, findings have important implications for health care resource spending and to assess the cost-effectiveness of deviated first line treatment practices that have emerged in the treatment of advanced ovarian cancer patients.

PCN73

DIRECT MEDICAL COSTS (DMC) OF TREATING PROSTATE CANCER IN A MEDICAL COOPERATIVE HMO IN BRAZIL: RESULTS FROM A LONGITUDINAL ANALYSIS OF AN ADMINISTRATIVE DATABASE

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OBJECTIVES: The aim of this study is to determine direct medical costs of treating patients with prostate cancer from the perspective of a Brazilian HMO. **METHODS:** An administrative database containing inpatient and outpatient claims of Unimed São Jose do Rio Preto, a HMO in São Paulo state with 131,064 beneficiaries, was reviewed from Jan/2004 to Dec/2013. Eligibility criteria were patients with a medical claim associated with prostate cancer (ICD-10 code C61) from Jun/2012 to Dec/2012, with more than 30-days of follow-up data. Diagnosis date for these patients were ascertained and they were followed until death or loss of follow-up, whichever comes first. Outcome was direct medical costs (DMC), calculated as the sum of the medical claims for each patient included in the analysis. DMC-per-year associated with prostate cancer was calculated and stratified by treatment choice (wait-and-see, local therapy, androgen deprivation, chemotherapy). **RESULTS:** 312 patients met eligibility criteria, with a median follow-up of 2.94 years. Total DMC in this population was R$ 4,247,664.42, from which R$ 1,675,255.31 (39.4%) are related to diagnostic exams, R$ 792,795.52 (18.7%) to hospitalizations, R$ 615,164.85 (14.5%) to radiotherapy, R$ 333,388.04 (7.8%) to chemotherapy and R$ 831,060.70 (19.6%) to other outpatient costs. A total of 143 patients started treatment as "wait-and-see" with average DMC-per-year related to prostate cancer of R$ 432.44/year; for patients starting local therapy, there were 162 patients with average DMC-per-year of R$ 4,640.95/year; the androgen deprivation group had 19 patients with average DMC-per-year of R$ 5.850,15/year and 4 patients started chemotherapy with an average DMC-per-year of R$ 33.773,22/year. **CONCLUSIONS:** Patients with prostate cancer represent a significant economic burden to private payers, escalating as disease progresses. Patients starting chemotherapy may cost per year approximately 6 times the cost of patients in early stages of the disease.

PCN74

ASSESSING THE ECONOMIC BURDEN OF ADVERSE EFFECTS (AES) ASSOCIATED WITH METASTATIC MELANOMA (MM) TREATMENTS IN GERMANY

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OBJECTIVES: This study estimated the per-event cost and economic burden associated with managing the most common and/or severe AEs associated with 3 common treatment categories (chemotherapy [CT], targeted therapy [TT], and immunotherapy [IT]) for MM in Germany from the statutory health insurance (SHI) system perspective. **METHODS:** A literature review was conducted to evaluate the incidence and types of AEs associated with the 3 treatment categories. A total of 29 AEs (CT:11; TT:11; and IT:7), all-severity grades (Gr) occurring in >20% or Gr 3/4 occurring in >5%, were selected. Medical resource use related to the management of AEs was assessed by conducting 2 blinded Delphi panel cycles with 9 clinicians. Published unit costs were used to estimate the costs per AE and then combined with AE incidence (assuming 1 occurrence/patient/cycle), treatment usage, and 1-year prevalence of MM (1165 cases) to estimate the treatment burden in Germany for a single AE occurrence. **RESULTS:** The most cost-intensive AEs were all Gr 3/4. For CT, the most cost-intensive AEs were neutropenia/leukopenia and thrombocytopenia, representing a mean cost per patient of €1744 and €1095, respectively. For TT, AEs were rash and squamous cell carcinoma (SCC), with a mean cost of €392 and €323, respectively. For IT, AEs were colitis and diarrhea, with a mean cost of €1444 and €1274, respectively. The top 5 AEs across all 3 treatment categories contributing most to the burden were all Gr 3/4 and included neutropenia/leukopenia (mean total cost of €110,627), colitis (€40,534), diarrhea (€37,874), SCC (€26,237), and immune-related hypophysitis (€23,375). **CONCLUSIONS:** Substantial costs in the management of AEs are associated with MM therapies in Germany. The overall burden is likely to be underestimated since it does not account for AE recurrence.

PCN75

FREQUENCY AND COSTS ASSOCIATED WITH TARGETED THERAPY-RELATED ADVERSE EVENTS (AES) DURING FIRST AND SECOND LINE OF TREATMENT (LOT) AMONG PATIENTS WITH METASTATIC COLORECTAL CANCER (MCRC)

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OBJECTIVES: To examine AE rates and associated costs among mCRC patients treated with bevacizumab (BV) or cetuximab (CET). **METHODS:** Using a large national US claims database from 1/2008-3/2012, patients with mCRC were identified (≥2 claims for colon or rectal cancer and metastatic disease), with enrollment in the health plan for ≥6m before and after the 1st metastatic claim date. Patients received BV or CET during 1st line (LOT1) and/or 2nd line (LOT2) therapy. LOT2 was defined as addition of any new agent ≥28d after start of LOT1. AEs, identified with ICD-9 codes on health care claims, were assessed from start of 1st targeted therapy in LOT1 or LOT2 to the last targeted therapy date+28d or a new LOT. Incident Rate Ratios (IRR) were calculated for each AE (incidence rate for CET/incidence rate for BV). Multivariate regression analyses assessed medical costs. **RESULTS:** In LOT1, there were 1,255 BV and 119 CET patients; in LOT2, 671 BV and 157 CET patients. The CET cohort had higher incidence rates (IRR>1; p<0.05) in LOT1 for: dermatologic events (IRR=8.67), GI (IRR=1.38), DVT (IRR=2.58), metabolism (IRR=2.11), hemorrhage (IRR=2.32) and infusion reactions (IRR=1.81). In LOT2, the CET cohort had higher rates (p<0.05) for: dermatologic (IRR=9.28), GI (IRR=1.36), DVT (IRR=1.75), metabolism (IRR=1.75), infusion reactions (IRR=1.54), hemorrhage (IRR=2.32); and Sepsis